



UNIVERSITI TEKNOLOGI MARA

DTC765: INTEGRATED PRODUCT DEVELOPMENT

Course Name (English)	INTEGRATED PRODUCT DEVELOPMENT APPROVED
Course Code	DTC765
MQF Credit	4
Course Description	Integrated Product Development (IPD) is based on the integration of different disciplines in an organization, whether real or virtual, collaborate to design and produce products. Such cooperation and interaction from various disciplines is important to establish people, methods, design, administration, manufacturing, technology and processes involve either in-house or out- source resource. The IPD concepts is to reduce development cycle time and improve product quality and value. Therefore this course aims to provide a thorough grounding of IPD that is based on the integrated design of products and manufacturing and support processes.
Transferable Skills	Describe and use the fundamental nomenclature of the Integrated Product Development that involves the integration of different disciplines in collaborate ideas and methods to design and produce products. Plan and manage organization and teams, the business process of product development, techniques and methodologies, product development strategy, technical tools, and systems architecture. Justify technical capabilities to suit the needs of New Product Development (NPD) in line with the latest technology, identifies a problem, formulates it into a business opportunity, encourages wild ideas to generate innovative solutions.
Teaching Methodologies	Lectures, Blended Learning, Inquiry-based Learning, Case Study, Problem Based Learning (PBL), Discussion, Presentation, Small Group Sessions , Supervision
CLO	<p>CLO1 Describe and use the fundamental nomenclature of the Integrated Product Development that involves the integration of different disciplines in collaborate ideas and methods to design and produce products.</p> <p>CLO2 Plan and manage organization and teams, the business process of product development, techniques and methodologies, product development strategy, technical tools, and systems architecture</p> <p>CLO3 Justify technical capabilities to suit the needs of New Product Development (NPD) in line with the latest technology, identifies a problem, formulates it into a business opportunity, encourages wild ideas to generate innovative solutions.</p>
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction to the Integrated Product Development (IPD) 1.1) Definition, Purpose, Impact and the Role of Design and Design Thinking	
2. The discipline of IPD and New Product Development (NPD) 2.1) Product Development Environment: Development, Process and Organization	
3. (Product Development Environment: Development, Process and Organization) 3.1) n/a	
4. Understand Customer Needs And Manage Requirements 4.1) How Increasing Values to Customer Improves Business Result	
5. Plan And Manage Product Development. 5.1) Integrate Product development and R&D with Business Strategy and Plan	
6. Create An Efficient Development Approach 6.1) n/a	
7. Use Product Development Teams. 7.1) Identify and Involve Development Team From Early Stage	

8. Integrate Process Design. 8.1) Integration between Design, Management, Manufacturing and Product Process)
9. Manage Costs From The Start. 9.1) Awareness of Affordability and Life Cycle Costs
10. Involve Suppliers And Subcontractors Early. 10.1) Identify and Utilize Technology, Application, Process, Constraints and Cost
11. Develop Robust Designs. 11.1) Quality Engineering, Reliability Technique
12. Integrate Cae, Cad, Cam & Case Tools 12.1) Understand the latest technique and technology
13. Simulate Product Performance And Manufacturing Processes Electroni 13.1) n/a
14. Intellectual Properties 14.1) n/a

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment				
	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment 1	20%	CLO1
	Assignment	Assignment 2	20%	CLO2
Assignment	Assignment 3	60%	CLO3	

Reading List	This Course does not have any book resources
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources